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A.D. 1887, 24*th* DECEMBER. N° 17,742.

PROVISIONAL SPECIFICATION.

[Communicated from abroad by VICTOR MEYENBERG, of Paderboon, Westphalia, in the Empire of Germany, Merchant.]

Improvements in Apparatus for the Treatment of Persons Suffering from Diphtheria, Croup, and the like Affections of the Throat.

I, JOHN DEACON NEWTON of Heriot Road Hendon in the County of Middlesex Gentleman do hereby declare the nature of this invention to be as follows :—

This invention relates to improvements in the apparatus now in use by the Medical profession for the removal of mucous phlegm fungoid growth and other obstructive substances from the throats of persons suffering from diphtheria croup and other diseases by the agency of a spray of some suitable medicinal fluid directed upon the seat of disease. The invention is carried out as follows :—

A flask of glass or other suitable material containing the medicinal fluid is suspended by attachment to an upright bracket or other suitable means.

Communicating with the interior of the flask from the top are two tubes. One of these tubes is for the passage of the fluid to the needle hereinafter mentioned. The other is an air tube filled by means of the ordinary india rubber tube and ball apparatus used in scent spray bottles, enemas and other instruments. These tubes are fitted to an instrument which at its other end terminates in a fine needle with a slit or slits on one or each side close to its point. After their junction with this instrument the tubes are continued concentrically. The inner concentric tube contains the fluid which has been previously heated in the flask. The outer concentric tube contains air forced into it as before mentioned. The fluid and the air meet at a point just

before the opening or openings in the needle. For the convenience of operating this instrument is preferably made so that the needle can be detached from the other parts and those parts from each other. The needle is directed to the seat of disease and the fluid by the operation of and mixed with the air is diffused upon the diseased part of the throat which is thereby cleared of mucous phlegm, fungoid growth, and other collected substances. The use of the india rubber apparatus above mentioned enables the operator to regulate the amount and pressure of the air as desired—A thermometer is also suspend d in the flask that the heat of the fluid may be readily ascertained.

Dated this 24th day of December 1887.

WHITE & DE BURIATTE,
Agents for Applicant.

COMPLETE SPECIFICATION.

Improvements in Apparatus for the Treatment of Persons Suffering from Diphtheria, Croup, and the like Affections of the Throat.

I, JOHN DEACON NEWTON of Heriot Road Hendon in the County of Middlesex Gentleman do hereby declare the nature of this invention (a communication from abroad by Victor Meyenberg) and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

This invention relates to improvements in the apparatus now in use by the medical profession for the removal of mucous phlegm, fungoid growth and other obstructive substances from the throats of persons suffering from diphtheria croup and other diseases by the agency of a spray of some suitable medicinal fluid directed upon the seat of disease. The invention is carried out as follows :—

Fig. 1 on the accompanying sheet of drawings is a side view in elevation of the whole improved apparatus and Fig. 2 is a section of one part of such apparatus to be more particularly referred to hereafter. In both Figs. the same parts are designated by the same letters.

Referring now to Fig. 1. *a.* is a flask of glass or other suitable material containing the medicinal fluid which is suspended over the spirit lamp (L) by attachment to the upright bracket (S) as shown in the drawing. Communicating with the interior of the flask from the top are two tubes (*e.* and *d.*) made of glass or other suitable material. Tube *e.* is for the passage of the medicinal fluid to the needle (*l*) hereafter mentioned and tube *d.* is an air tube to be filled by means of the ordinary India rubber tube and ball apparatus (G) (as used in scent spray bottles enemas and other instruments) *g.* and *f.* are tubes of India rubber or other suitable material fitted to and being continuations of tubes *e.* and *d.* respectively. At the points *i* and *h* respectively the tubes *e. g.* and *d. f.* are conducted into the instrument (K) made of wood steel or any other suitable material shown in section in Fig. 2 and which terminates at its other end in the fine needle (*l*) which has a slit or slits (*m*) on one or each side close to its point. After entering this instrument the tube containing the fluid is continued within it as shown along the dotted line in Fig. 1 and in Fig. 2 between the points $i\ i^1$ and beyond i^1 until it reaches a point (*m*) just before the slit or slits in the needle (*l*). The air introduced into the instrument K. at the point *h.* is carried along through the instrument until it reaches the point where the medicinal fluid emerges from its tube and there the air and fluid commingle. It is obvious that the instrument K might be made in one or two parts. For the convenience of operating it is preferable that it should be made in parts as shown in Fig. 2 so that the needle (*l*) is detachable from the rest of the instrument and the parts $h.\ h^1$ are detachable from the parts $k.\ k^1$. In using the improved apparatus the needle is directed to the seat of disease and the fluid being carried along to the slit or slits in the needle there commingles with the air and by the operation of the air is diffused in a spray upon the diseased part of the

throat which is thereby cleared of mucous phlegm fungoid growth and other collected substances. The use of the India rubber apparatus (G) enables the operator to regulate the amount and pressure of the air as desired A thermometer (Fig. 1. *t*) is also suspended in the flask that the heat of the fluid may be readily ascertained.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed as communicated to me by my foreign correspondent I declare that what I claim is:—

1. The whole improved apparatus substantially as and for the purposes hereinbefore described or any mere mechanical equivalent thereof.

2. The instrument part of the said apparatus shown in Fig. 2 and having its parts arranged substantially as and for the purposes hereinbefore described and shown in the said figure or any mere mechanical equivalent thereof.

Dated this 27th day of April 1888.

WHITE & DE BURIATTE,
Agents for the Applicant.

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1888.

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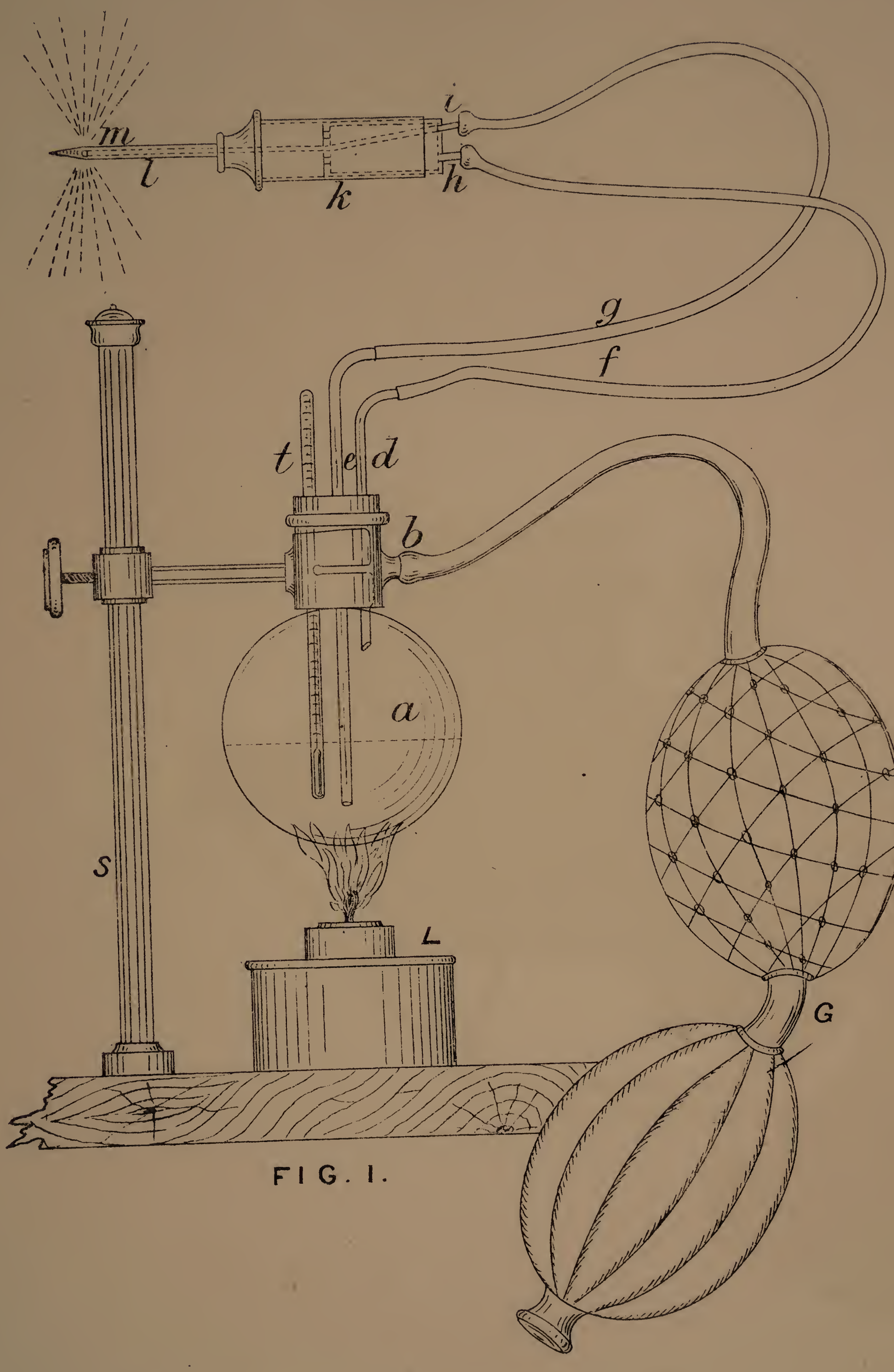


FIG. 1.

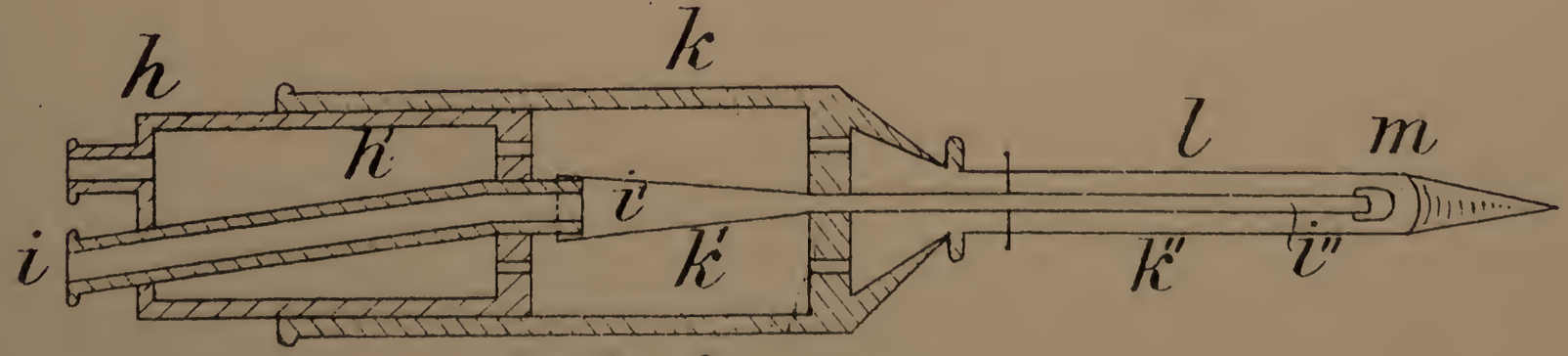


FIG. 2.

[This Drawing is a reproduction of the Original on a reduced scale.]

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Malby & Sons, Photo-Litho.